

# NONPOINT SOURCE TIMES

Volume 10, Issue 4

Fall 2001

## Preview of Coming attractions: Stormwater Phase II

The regulation of stormwater in Maine will soon rise to a new level. The change is coming as a result of Federal regulations pertaining to stormwater under the National Pollutant Discharge Elimination System (NPDES) Program. The U.S. Environmental Protection Agency (EPA) out of Boston has previously administered this program in Maine. In February 2001, however, the NPDES program was delegated to the State of Maine. As a result, the Maine DEP will be developing standards to implement the Stormwater Phase II Program.

### Whatever happened to Phase I?

Phase I rules were issued by EPA in 1990 and pertained to municipalities with a population of more than 100,000, as well as to industrial facilities and construction activities disturbing more than 5 acres. Since there are no municipalities subject to Phase I in Maine, and since the Maine DEP already regulates large construction sites under the State's Stormwater Management Law, the Phase I rules have not had a major impact in Maine. Industrial facilities are required to develop a Stormwater Pollution Prevention Plan and file a notice with EPA to comply with a Stormwater Multi-Sector General Permit issued by EPA in November, 2000. Coverage under the General Permit runs for 5 years. By 2005, Maine DEP will be responsible for issuing new permit requirements for industrial activities. In the meantime, those facilities will continue to operate under EPA's General Permit.

(Continued on page 2)



## SWCD Covers Oxford County Top to Bottom

*(Editors Note: This article originally appeared in the Oxford County newsletter. Thanks to Jeff Stern for sharing it with us.)*

Oxford County is big. "How big?", you ask. (Thought you'd never ask!) It sprawls across western Maine from the border with Canada north of Cupsuptic Lake south to the Saco and Ossipee Rivers - 2,023 square miles in all. That's larger than Rhode Island or Delaware!

What's this geography lesson got to do with anything? When you're talking natural resources, it means the conservation challenges are diverse and far flung. This year, the Oxford County Soil and Water Conservation District (SWCD) is involved

*(Continued on page 10)*

### Inside This Issue

Mousam Youth Conservation Corps	2
2002 NPS Projects	3
NPSTC Fall Course Schedule	4
Short updates from Bureau of Land & Water Quality	5
NEIWPPC's NPS Workgroup To Host Workshop	5
Buffer Rule Making	6
Changing Behaviors to Protect Water Quality	7
Calendar & Materials	13



(Continued from page 1)

#### What does Phase II regulate?

The Stormwater Phase II Rules make some significant changes to the program. Construction sites that disturb more than 1 acre of land, and industrial activities operated by municipalities (including public works facilities), will become regulated. Also, under the rules, urban areas, defined as areas with a population of at least 50,000 and a population density of at least 1,000 people per square mile as determined by the U.S. Census Bureau, will be subject to regulation. Based on the 1990 census (2000 census data is not yet available), there are 21 municipalities, plus the Penobscot Indian Island Reservation that are automatically designated under these criteria. These include the municipalities in the areas of greater Portland (Portland, So. Portland, Scarborough, Cape Elizabeth, Westbrook, Gorham, and Falmouth), Lewiston (Lewiston, Auburn, Sabattus and Lison) and Bangor (Bangor, Brewer, Veazie, Orono, and Old Town), as well as five towns along the Maine and New Hampshire border (Kittery, Elliot, Berwick, So. Berwick and Lebanon). In addition to these communities, the Maine DEP will designate other towns that have the potential to significantly impact receiving waters due to stormwater runoff. State and federal facilities; e.g., universities and military bases; in these communities will also be subject to regulation.

#### What are the requirements that a regulated MS4\* must meet?

A regulated MS4 (Municipal Separate Storm Sewer) must develop, implement and enforce a program to reduce the discharge of pollutants to the "maximum extent practicable." The program must include six minimum control measures. These include:

- Public education and outreach
- Public involvement and participation
- Illicit discharge detection and elimination
- Construction site runoff control
- Post-Construction stormwater management
- Pollution prevention measures for municipal operations

The regulated MS4 will be required to submit a Notice of Intent and identify the following elements for each control measure: Measurable goals, Best Management Practices, Timing and frequency of the actions, and Responsible persons. Record-keeping and reporting will also be required to monitor progress in meeting program goals.

#### What is the schedule for implementing the Phase II requirements?

The Maine DEP is required to have a general permit form available for regulated MS4's and for construction sites by December 8, 2002. Automatically designated MS4s and developers subject to the construction site rules will be required to file for coverage under the general permit by

March 10, 2003. A schedule for DEP to designate additional regulated MS4 communities has not yet been established.

DEP will be working with an advisory group that will include representatives from regulated MS4's to develop the MS4 and Construction General Permits. DEP and EPA will also co-sponsor a training workshop for all interested parties this coming fall. DEP will also be hiring a stormwater program coordinator this summer to oversee these activities.

*\*MS4 = Municipal Separate Storm Sewer System includes any system of stormwater conveyances in a municipality, including road ditches.*

*For more information, contact Don Witherill at DEP: 207-287-7725 or donald.t.witherill@state.me.us*

## Mousam Lake Youth Conservation Corps

### SUMMARY OF A GREAT 2001 SEASON

The inaugural season of the Mousam Lake Youth Conservation Corps (YCC) was a great success. Over an eight-week period the crew of Acton and Shapleigh youth installed conservation measures at 20 residential and road sites across the watershed, easily exceeding the pre-season goal of 15. Of these sites, ten were private boat access ways and three were camp roads, land uses that represent some of the most significant sources of nonpoint source pollution in the Mousam Lake Watershed.

The plight of Mousam Lake's water quality will certainly be improved by the crew's impressive effort.

According to the Maine Department of	<b>Technical assistance visits:</b>	<b>over 60</b>
Environmental Protection,	<b>Total YCC projects completed:</b>	<b>20</b>

water quality in Mousam Lake has been decreasing steadily over the past 25 years. They believe that the decline has been due in large part to non-point source pollution from local development. The primary source of this pollution, and the target of the YCC, is erosion, which is present everywhere from camp roads and driveways to wave-battered shorelines. If untreated this pollution could expedite the decline in the lake's water quality, reducing water clarity, damaging cold-water fish habitat, decreasing property values, and setting off messy algal blooms.

(Continued on page 11)



# Nonpoint Source Pollution Control Projects for 2002

DEP will provide financial assistance for 20 NPS projects to help prevent, control, or abate water pollution caused by polluted runoff. NPS grants will be funded with anticipated FFY 2002 allocations provided to Maine by the EPA under Section 319 of the Federal Clean Water Act. Project selection resulted from the Request For Proposals distributed in March, 2001. Twenty-three proposals were received in May 2001, and reviewed by representatives from DEP, EPA, NRCS, and the State Planning Office. DEP is working with Sponsors to revise work plans as needed to secure final approval. Grant awards and project start-ups are anticipated for early spring, 2002. For more information contact Norm Marcotte, tel. 207-287-7727 or email - norm.g.marcotte@state.me.us

Sponsor	Project Title	NPS Grant Amount	Total (with match)
Androscoggin Valley SWCD	Sabattus Pond Watershed Project, Phase I	100,000	167,000
Cumberland County SWCD	Little Sebago Lake Watershed Survey – Phase I	11,249	28,090
Wells National Estuarine Research Reserve	York River Watershed Survey and Watershed Management Plan	42,694	71,252
Cumberland County SWCD	Forest Lake Watershed Management Plan Project	26,733	46,951
Town of St. Agatha	Long Lake Watershed Survey, Phase III	11,250	21,750
Oxford County SWCD	Sunday River Subwatershed NPS Project, Phase I	96,649	175,563
Penobscot County SWCD	Sebasticook Lake Watershed Project, Phase I	21,310	36,850
Androscoggin Valley Council of Governments	Norway Lakes Improvement Project	44,700	74,500
York County SWCD	Kennebunk Pond Watershed Survey	6,152	12,362
South Portland Land Trust	Trout Brook Watershed Survey	7,117	12,680
Town of Brunswick	New Meadows River Watershed: Lower Watershed Survey and Management Plan	35,000	58,350
Kennebec County SWCD	NPS Reduction, West Branch Sheepscot River	168,300	318,300
Echo Lake Association	Echo Lake Watershed Survey	7,368	12,368
Androscoggin Valley SWCD	Tripp Lake Watershed Management Plan Development	21,645	36,151
Cumberland County SWCD	Tannery Brook Watershed Management Plan Project	31,652	53,555
Belgrade Regional Conservation Alliance	Great Pond Watershed NPS Pollution Remediation Project	63,670	107,242
Pocasset Lake Association	Pocasset Lake Watershed Survey	6,558	11,054
Mount Desert Island Water Quality Coalition	Eddie Brook Watershed Survey	4,088	13,864
Town of Limestone	Trafton Lake Watershed Survey	9,642	15,291
Brettuns Pond Association.	Brettuns Pond Watershed Management Plan	8,404	14,064
	totals	724,181	1,287,237



# Fall I Nonpoint Source Training Center Schedule

## Erosion Control

Basic Erosion and Sediment Control Practices For Contractors. Cost: \$35. Description: This course is geared toward contractors and is the first of two courses that need to be taken in order to participate in the Voluntary Contractor Certification Program for Erosion Control Practices. In addition to a section on why erosion control is important, basic stabilization techniques including silt fence, hay and bark mulch, and ditching, are covered. A small group exercise on planning erosion control on a small site is also used as a means to incorporate topics covered.

Millinocket, November 27, 2001, Heritage Motor Inn / Best Western Wells,  
December 4, 2001, Village By The Sea.

Advanced Erosion and Sediment Control Practices For Contractors. Cost : \$35. Description: This course is again geared toward contractors and is the second of two courses that need to be taken in order to participate in the Voluntary Contractor Certification Program for Erosion Control Practices. This is the more advanced course and includes a review of the basic techniques as well as vegetative stabilization, road crossings and geotextiles. A small group exercise on planning erosion control on a larger more complicated development site is also used as a means to incorporate topics covered.

Fort Fairfield, November 28, 2001, Fort Fairfield Public Works Dept.  
Saco, December 6, 2001, Holiday Inn Express

Primer/Exam to Become a Certified Professional in Erosion & Sediment Control Cost: \$80 for Primer and \$40 for Exam. Description: This Primer Course and Exam is part of training and certification under the CPESC Program administered by the International Erosion Control Association and the Soil and Water Conservation Society. The training course covers local laws and regulations on erosion control, predicting soil loss, site planning, runoff control, soil stabilization and sediment control. The course further provides an exam Study Guide and refresher exercise on erosion control principles. The Exam is an eight-hour test that takes place approximately one month from the primer date.

Portland, November 7, 2001, Holiday Inn West, Riverside Street

Exam Portland December 20, 2001 Holiday Inn West, Riverside Street

Continuing Education Programs For Certified Contractors: New Erosion Control Products and Chemical Products Handling. Cost: \$25 Description: This Course is a continuing education program to assist certified contractors in getting re-certified for another two years. It will include an update on program benefits, etc., and information on new erosion control products including the new DEP guidelines on the use of erosion control mix. It will also include information on the proper management of chemical products at construction sites.

Presque Isle, November 29, 2001, Presque Isle Inn & Convention Center

Augusta, December 11, 2001, Augusta Civic Center

Bangor December 13, 2001, Ramada Inn, Odlin Road

Portland, December 18, 2001, Holiday Inn, Riverside Street

## Stormwater

NPDES Phase II Stormwater Training. Cost: \$35. Description: This is a day-long informational session on the new NPDES Phase II Stormwater Program. This new program will regulate construction sites that disturb more than one acre and industrial facilities (including public works facilities). In addition urban areas will be subject to regulation. As defined urban areas will include at least 21 municipalities in Maine. The session is geared towards municipal officials, consultants, and contractors and will provide information on the various requirements for program compliance as well as when the requirements will take effect.

Lewiston, November 15, 2001, Ramada Inn, Pleasant Street.

Please register for the above referenced conference/courses by downloading and completing the form off of Maine DEP's web site (<http://www.state.me.us/dep/blwq/training/schedule.htm>) and sending it to: The Nonpoint Source Training and Resource Center, Maine Department of Environmental Protection, 17 State House Station Augusta, Maine 04333.

If you have any questions please contact Bill Laflamme at 207-287-7726 or [william.n.laflamme@state.me.us](mailto:william.n.laflamme@state.me.us)

## Rulemaking

To stay up to date on rule changes within the Bureau of Land & Water Quality see:  
<http://www.state.me.us/dep/blwq/rule.htm>



---

## **Bureau of Land & Water Quality News Tidbits**

---

### Watershed management plan Upper half of Great Pond watershed.

The Belgrade Regional Conservation Alliance (BRCA), (with assistance from DEP) has completed a watershed management plan for the upper half of the Great Pond (Belgrade) watershed. The upper half includes Great Pond, North Pond, East Pond, and McGrath Pond/Salmon Lake. This was funded in part by a grant from the Maine Priority Watersheds Protection Grants Program (38 MRSA (Sec. 2013)). The project included completing watershed surveys for the lakes and development of an action plan for lake protection.

The BRCA has a 319 (Nonpoint Source) grant beginning in Spring 2001 to continue the process for the lower half of the chain (Long Pond and Messalonskee Lake). Contact: Mary-Ellen Dennis 207-287-7729 or mary-ellen.c.dennis@state.me.us for more information.

### Watershed Survey 2001 Training

Six Lake Watershed Survey trainings took place this May. Staff from the Division of Watershed Management, area Soil & Water Districts, University of Maine Cooperative Extension and AmeriCorp Volunteer Leaders all participated in the training of various lake association volunteers. The lake watersheds that are conducting Watershed Surveys include Bear Pond in Turner; Lake St. George in Liberty, Clary Lake in Whitefield, Belgrade Lakes, Echo Lake and Hanson Brook Lake in the County. Contact: Karen Hahnel 207-287-7732 or karen.a.hahnel@state.me.us for more information.

### Update on contractor certification.

There are now **219** individuals certified in Erosion and Sediment Control Practices located in 83 municipalities and over **350** candidates who have taken the training but have not had a site inspection done to date. DEP has sent this "Candidates" listing to each of the Soil & Water Conservation Districts so that they can contact these candidates and schedule an inspection. We hope to get at least an additional 75 to 100 individuals certified by the end of the year. Contact Bill Laflamme at 207-287-7726 or william.n.laflamme@state.me.us

List of certified contractors: <http://janus.state.me.us/dep/blwq/stormwtr/ccec.htm>

### Family Lake Days

Family Lake Days have been held at Wilson Lake in Acton, Highland Lake in Windham, and Webb Lake in Weld. The

activities at each of these lakes were tailored to the needs of the lake association. At each location children learned about several ways to protect their lake and printed their own "Plant a Buffer" tee-shirt. Other activities included a "Musical Milfoil" game to learn about different lake plants, how an invasion of milfoil can ruin swimming, boating and fishing, and a culminating activity where children remove simulated milfoil from a boat, trailer and motor. For more information contact Christine Smith at 207-287-7734 or christine.p.smith@stae.me.us

### Lakes are blooming.

The list of lakes currently sustaining a bloom is on the web at <http://www.state.me.us/dep/blwq/doclake/repbloom.htm> The list is updated weekly during the summer and into early fall. A banner year for blooms is predicted. Lake temperatures are up and stratification is fairly strong. For more information contact Judy Potvin 207-7782 or judy.potvin@state.me.us

---

## **NEIWPCC's NPS Workgroup to Host Tech transfer Workshop**

---

This year, the New England Interstate Water Pollution Control Commission's (NEIWPCC's) Nonpoint Source Workgroup will host its annual Technology Transfer Workshop in conjunction with the New York State Department of Environmental Conservation. The Workshop will address Watershed Planning and Assessment Techniques for local government officials, planning and zoning departments, and communities. The two-day Workshop will be held September 13-14, at West Point's Hotel Thayer in the heart of New York State's Hudson Valley region.

The first day of the Workshop features information on a number of technologies and processes that can serve as tools for municipalities and planning organizations to assess and evaluate local watersheds and natural resources. Assessment tools and approaches will be described, demonstrated, and applied to watershed management and protection objectives. The second day of the Workshop begins with an explanation of the nonpoint source pollution management projects featured for the day, followed by site visits or "hands on" computer training for participants. One site visit will demonstrate successful New York City DEP watershed protection and restoration projects; a second features innovative golf course turf management and pollution prevention techniques. One computer session will train individuals to use a laptop-

*(Continued on page 7)*



## Aquacide

*(Editors note: With the recent push to get people concerned about invasive aquatic plants, aquacide issues have arisen. Here for your reference is some information on its legal use in Maine.)*

Did you know that it is illegal to apply pesticides and herbicides to lakes, ponds, streams and wetlands in the State of Maine unless you have a DEP permit? Apparently you are not alone. There is widespread lack of awareness in Maine, including DEP staff, that it is illegal to apply aquatic pesticides of any kind to waters of the State of Maine without a permit from DEP. Furthermore, the only people who are likely to get permits to apply aquatic pesticides are state agencies or their contractors, and approved projects must include application only by licensed applicators.

DEP and the Pesticides Control Board are jointly investigating two incidents in Scarborough in which the aquatic herbicide, 2,4-D, was illegally applied to waters of the State. The two incidents both were perpetrated upon Grondin Pond, which is a 28-acre artificial pond that was created as part of the closure of a gravel pit. Even though the pond is technically not a Great Pond, the outlet flows to the Libby River, thereby making it waters of the state. Along with the perception by the users that this was an "unregulated" pond, the lack of knowledge of the regulations and the misleading advertising by the distributor contributed to this incident.

The distributor, Aquacide, gives the impression in its catalog that their 2,4-D formulation, **aquacide**, is approved for use in the state. Although an aquacide may be registered by the Board of Pesticide Control in Maine, other applicable state or local requirements still apply. This company has been selling aquacide with this advertising for decades, and most lakeshore property owners probably have no idea that you can't use this stuff without a DEP permit. What we have encountered is probably just the tip of the iceberg - this is only one company, one chemical of many listed in their catalog, one pond in one town, and this town is not even a "lake town".

All of us at DEP need to educate the people that we encounter during surveys, complaint investigation or compliance inspections about the prohibition on applying aquatic pesticides. With the widespread availability of the chemicals and the increasing public concern about invasive aquatic plants, it is extremely important that we educate people about the prohibitions. I know of at least one instance where DEP staff did not tell a property owner who was using aquacide in the water that it was illegal. We must not allow this to happen any longer. When we encounter

evidence of use, or admissions of use, we must tell people that it is illegal, and tell them to stop applying aquatic pesticides. This should rank in the same class as malfunctions discharging to lakes, straight pipes, and severe NRPA violations.

Please contact the Water Resource Regulation enforcement section with any information you uncover about illegal applications of pesticides.

By Phil Garwood 207-287-7695 or phil.e.garwood@state.me.us

## Rulemaking on Buffers to Begin Soon

DEP and LURC will both be initiating rule-making efforts by late summer with respect to cutting or removal of vegetation adjacent to surface waters. This activity was mandated by the 119th Legislature, which gave the agencies a directive to improve the consistency in cutting standards between the agencies. Both agencies are also to consult with the DOC Bureau of Forestry on their separate process to develop state-wide water quality standards for timber harvesting activity. All 3 agencies are to report to the Legislature with provisional rules as of January 2, 2002. The rules will be subject to Legislative approval, and may result in changes in statutes (NRPA and/or Shoreland Zoning).

On June 19th, DEP hosted a meeting of stakeholders to present an initial proposal for revising the NRPA and Permit by Rule (PBR) standards. In the draft proposal, DEP would regulate cutting or removal of vegetation on land adjacent to protected natural resources (within 75 feet) through the NRPA. Land subject to Shoreland Zoning (SZ) would be exempt, as would limited cutting that meets current SZ standards. To handle situations where a 75 foot set-back would not be feasible, standards have been proposed in PBR. These changes would more closely align DEP's program with LURC's rules, which require a minimum buffer of 75 feet on any stream. Currently, small streams in the organized towns that are not subject to SZ (1st order streams) have no regulatory restrictions on cutting.

Proposed changes will be brought to the BEP in early September; a public hearing will likely be scheduled in October so that a decision can be reached by the end of December. For more information, contact: Don Witherill 207-287-7725 or don.t.witherill@state.me.us or Mike Mullen 207-4728 or mike.k.mullen@state.me.us

## What Have We Learned?

## What Does It All Mean?

## Where Do we Go From Here?

(Editors note: This is an excerpt from the wrap-up lunch speech at the 2nd National Conference on NPS Information & Education held in Chicago, May 17, 2001. Mary Maresters works for The Rensselaerville Institute in NY. For a complete copy of the speech please contact me at [kathy.m.hoppe@state.me.us](mailto:kathy.m.hoppe@state.me.us).)

### What have we learned?

1. That environmental change requires behavioral change of the "customers" of education and outreach programs.

- Certainly, there are other types of change that precede behavioral change: changes in awareness, changes in knowledge, changes in perception of the problem, perhaps attitudes (although sometimes changes in attitude are a result of behavior change, not a precedent). But these alone are not enough to achieve improvement in the water quality of our lakes, streams, rivers, estuaries, groundwater and oceans. Your program customers have to do something different, practice new environmental protective behaviors - some that may be inconvenient - rather than continue present behaviors and habits.

2. That *increased awareness, increased knowledge, or improvement in attitudes does not necessarily mean a change in behavior*. (Twinkie example: extensive knowledge in good nutritional habits has not overcome my behavior to have Twinkies and coffee as lunch!). Awareness, knowledge and attitude are components in building to behavior change, but do not alone ensure that behavior will change.

3. That we have to learn what to do to *persuade* people to change their behavior.

- Unfortunately, persuasion has too often been equated to the term coercion, which implies pressuring people to do something against their will or better judgment. Persuasion as I use it here means that you need to move people to do something for their own and the common good; it is used very positively to achieve desired goals - which in this case is a cleaner environment, which many adults want for their children and grandchildren. [Note: an example of persuasive advertisement noted by adults and older children is the American Indian crying when he saw people littering. Clearly this had an emotional as well as intellectual impact on viewers of the advertisement.]

4. That *completing all activities in your program workplan does not equate to success* in terms of pollution prevention. Nonpoint source pollution prevention is not about what you do. It is about what your customers do as a result of what you do...or even because of other factors that you may or may not have controlled. Therefore, program people who sit back after they've completed all the activities in their workplan and think that they've succeeded in improving the environment are fooling themselves.

5. That *verifying behavior change is different, but not necessarily harder, than verifying change in knowledge, awareness or attitudes*. (An example of behavioral change verification is the gist of Weight Watchers: behavior change is verified on a weekly basis by cus-

(Continued on page 8)

**National Resource Council Report -- Assessing the TMDL Approach to Water Quality Management** (2001) text at: <http://www.nap.edu/books/0309075793/html/>

**Who Sprawls Most?** How Growth Patterns Differ Across the U.S. (report from the Brookings Institute) at: <http://www.brook.edu/es/urban/publications/fulton.pdf>

This is the report that resulted in several recent editorials about sprawl in southern Maine.

(Continued from page 5)

based education and decision-making program for watershed and water quality protection. Another will demonstrate a GIS-based tool with field data collection, assessment, and tracking capabilities for nonpoint source pollution management applications including sediment loading assessments; wetlands inventories and assessments; and inventories for stormwater infrastructure and septic systems.

Information on the Workshop, including the full agenda and registration information, will be available mid-summer on NEIWPCC's website: [www.neiwpcc.org/events.html](http://www.neiwpcc.org/events.html).





(Continued from page 7)

tomers getting weighed at each meeting). If you know what outcomes you want to achieve, you can then figure out what your customers need to do differently for you to achieve them. One key difference in this type of evaluation is that usually you need to follow your customers over some time interval; you characterize desired customer behavior before the intervention, and then follow-up with the customer over time to ensure that the change endures.

6. That the *present methods we're using to assess our programs are not giving us the information we need* (pre-post testing, awareness surveys, etc.) *to know that our programs are producing change.* We need to use methods that truly verify changes in customer behavior. [Note: we need to be aware of where our own behavior needs to change so that we can improve program performance.]

7. That *achieving customer behavior change is the first requisite; then we need to know if that change is sustained.* We have found that repetition is one way to leverage that sustainability; another is finding new ways to get across the same persuasive message. But the important thing is finding the right "hook" that gets people to assume and sustain change in behavior (for example, children love animals and will assume behaviors to protect them. If you can equate protecting animals to a clean environment, children will sustain new environmental protection behaviors, e.g. recycling plastics.)

#### What is the Difference between Informing vs. Persuading?

With nonpoint source pollution (as well as education and outreach programs in other topical areas), our informational programs will only be successful if we persuade people to behave differently. Yet most education and outreach programs are designed only to inform. What's the difference?

**Informing:** receiving information about which you are neutral. This is an intellectual function, and people process the information conceptually. Depending on interest, it may or may not become part of their knowledge base.

**Convincing:** receiving information that becomes part of your knowledge base, and eventually the accepting it as valid (i.e., making a value judgement about it). This is still an intellectual function, but the recipient at this point begins to personalize the information and incorporate it into their belief system.

**Persuading:** receiving information has an impact that causes the recipient to take action (i.e. change behavior). Webster defines persuasion as, "...to cause to do some-

thing." This is both an intellectual and an emotional function; you've caused the customer to take action on their convictions. Environmental protection programs must persuade customers to be inconvenienced (learn to recycle; use products that may be harder to find or be more costly; take additional measures – sometimes at added cost – to conserve resources; in general, do things that are for the common good at the expense of self-sacrifice). And their reasoning for this usually tied to an emotional stimulus. For example, few major reasons people are willing to change their behavior are:

- to make the environment better for their children or grandchildren;
- to protect their livelihood;
- to protect living creatures that are defenseless.

.....

#### Where do we go from here?

What are some of the things we can begin to do differently to ensure that programs lead to behavior change in customers?

1. Talk to customers, preferably before you finalize your program.

- find out what is important to your customers; learn what you would have to do to get them to change their behavior. What are the "hooks"?
- then, after you've begun to implement various aspects of your program...
  - find out how customers perceived the program
  - how did they use the information/skills
  - what benefits did they gain
  - what would they suggest you do differently
- The Institute has a tool that can help you learn these things by "reaching over" your program (**ResultReach**) to your customers to determine the impact you've had. It can be used at various points throughout the implementation period of the program (on-going monitoring) so that you can make sure you are on the right path to achieving your targets.
- Further, The Institute's experience is that a one-hour focus group with customers ahead of time can save innumerable hours of trying to "fix" a program after it has already begun.

2. Decide on a set of targets that you commit to achieve.

Then do not waver from those targets – change the activities, if you need to, to ensure that you meet your targets, but know what it is you want to achieve, and commit to achieving it.

(Continued on page 9)





(Continued from page 8)

Certainly, the desired outcome for the environment is that it is cleaner and more secure, but research shows that it can take up to ten years for environmental program efforts to make a difference, for example, in water quality. However, it takes much less time to get people to practice different behaviors, so set demonstration of those behaviors as your target, i.e. "x" number of people in this community who are not presently recycling waste motor oil will do so within 6 months.

**3. Monitor your progress constantly.** Use evaluation as a program management tool to keep your program on track. Verify what is important, keep track of your customers' progress, use the data you collect to course-correct your program and change your own behavior. Know what you have to learn about your customers and their behavior to ensure a successful program. Don't count on changes in knowledge and awareness as indicators that you are reaching your target – they don't necessarily indicate success. The Rensselaerville Institute has developed a number of tools that we administer to monitor program progress and ensure that implementors are on track to their desired results. The information you need to manage your program is often different than what funders need to build a regional or national "bigger picture" of environmental status. Constantly gather and use data that will guide your program, and make sure the data are understandable to everyone, and immediately useful to those who need to course-correct.

**4. Be truly collaborative** with program partners and stakeholders.

There are many "C" words that tend to be used interchangeably in program development and implementation, but they don't have the same meanings. Here are a few:

*Communication:* how people understand each other and how information is transferred.

*Coordination:* informing each unit how it needs to act and interact with the whole.

*Cooperation:* how each party contributes to the group (and beware, because fostering cooperation may result in stifling creativity and innovation!)

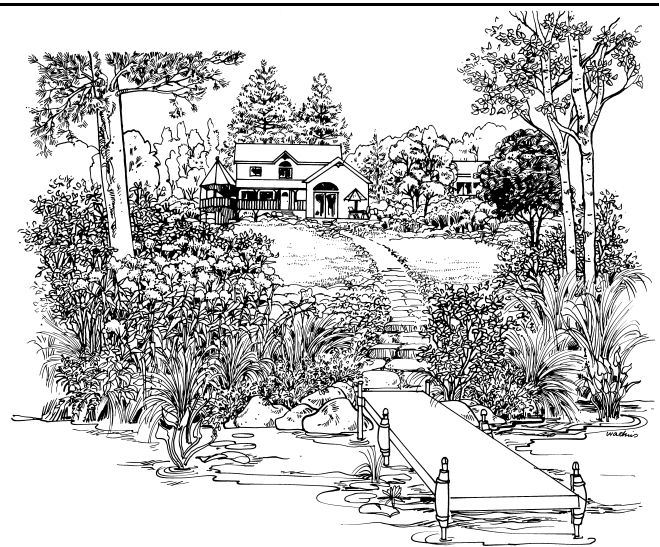
*Collaboration:* a process of shared creation; using information from diverse sources to create something new. Collaboration is not about relationships, it is about the pursuit of a specific result. Collaboration has five basic steps:

1. Define the challenge – know what you want to achieve.
2. Designate the collaborators – pick people who bring added value to the table.
3. Create the space – it must be interactive, and it

must be shared space.

4. Allow the time – this is a formal design or solution process, not a meeting.
5. Harness the result – develop the mechanism to implement the creation.

Michael Schrage, in his book, *Shared Minds*, described the collaborative efforts of Watson and Crick in their discovery of the double-helix shape of the DNA molecule. They had a set of tinker toys on a table that was located in an open area between their offices. As they learned new information, they would singly go to the tinker toys and try different models that would accommodate the increasing information they were gaining about DNA. Theirs was truly an example of collaboration: they knew their challenge, each brought a different perspective and new information every time each went back to the model, their space for creation was a shared space even though they worked separately to learn more and build their knowledge base about DNA, they didn't meet to discuss changes but rather singly tried new configurations of pieces to solve the puzzle, and used a flexible model that allowed them the opportunity to create what turned out to be the viable formation for DNA.



Looking for information on Buffers—try "Buffer Notes" a newsletter written by the National Association of Conservation Districts in cooperation with the Natural Resources Conservation Services and Farm Service Agency. Contact Bill Berry, Editor, at (715) 341-9119 or [billnick@coredcs.com](mailto:billnick@coredcs.com)



*(Continued from page 1)*

in a number of exciting projects, practically from one end of the county to the other. We're reaching more people than ever.

It's a big job. But, hey, when you're working with highly motivated volunteers and lake associations, and with knowledgeable, helpful resource professionals, there's no limit to the great things that can be accomplished! Join us for an armchair tour of some of our county's conservation hotspots funded by Maine DEP through an EPA Clean Water Act Section 319 grant.

### **LAKE ANASAGUNTICOOK**

Our tour begins in east central Oxford County. Enthusiastic local support has given the Lake Anasagunticook Watershed BMP Demonstration Project a strong head of steam in its second summer. (BMP stands for "Best Management Practice".) This beautiful lake, located in Hartford and Canton, serves as the public water supply for Canton.

A 1998 survey identified 72 sites where nonpoint source pollution - specifically, soil erosion - threatened water quality in the lake. When soil washes into lakes, phosphorus, a plant nutrient, often goes along for the ride. Too much phosphorus in a lake stimulates algae growth, which messes up water quality, chokes out fish and ruins recreation.

This grant project demonstrates erosion control methods by sharing the cost to design and implement them. And it's working! Last Fall, for example, we helped Al and Lisa Noyes, owners of an eroding boat ramp, fix their site. This stimulated interest among residents about using similar materials. In this case, we showcased the use of concrete "tri-lock blocks".

This summer, we're helping Hartford and Canton to stop erosion from town roads, and landowners to fix eroding driveways and to plant buffers. We also provide free technical assistance to watershed residents on a first come-first served basis.

### **BEAR POND**

Just over the hill from Lake Anasagunticook, lies the Bear Pond Watershed. Here, the Bear Pond Improvement Association and the Oxford County SWCD are wrapping up a watershed survey. Residents are concerned that the fast pace of development around Big and Little Bear Ponds threatens water quality. The report should be completed this fall.

### **RANGELEY LAKES**

From Fryeburg, we'll set our sights north and travel in the blink of an eye to Cupsuptic Lak. (This trip would take a lot

longer if you did it by car!) The Oxford County SWCD helps the Rangeley Lakes Heritage Trust coordinate a project to educate the public and correct erosion problems throughout the Rangeley Lakes region.

### **SUNDAY RIVER**

The final stop on today's tour is the Sunday River in Bethel and Newry. We've had the pleasure of working with an energetic, locally-led steering committee here. In early 2001, we and our partners put the finishing touches on a watershed survey for the eastern part of the Sunday River. We are making plans to complete the survey in the western half of the watershed in 2002. Community efforts to fix erosion problems (that were identified in the first survey) started this summer and will continue, with our assistance, for several years.

The Sunday River faces risks from the fast pace of development and from erratic flows. In recent years, watershed residents have witnessed upswings in stream bank erosion, sediment deposition in the river and destructive flooding. Fisheries habitat has been degraded. New channel cutting threatens homes, roads and farm fields. The Oxford County SWCD and the Sunday River steering committee are working with experts from throughout the state and nation to restore the health of the river.

### **END OF TOUR!**

Whew! We covered a lot of territory in the space of 11 paragraphs! Thanks for coming along. We've enjoyed your company, but please stay in touch. The world of conservation is dynamic; there are always new approaches, new projects and new challenges around the bend. We'll do our best to keep you, and all residents of Oxford County, up to speed. If you have any questions, comments or concerns, call us at the telephone number listed in this newsletter.

For more information contact Jeff Stern at the Oxford County SWCD [jeff-stern@me.nacdn.net](mailto:jeff-stern@me.nacdn.net)

The Indiana Department of Environmental Management has designed a workbook in Microsoft Excel that estimates sediment and nutrient load reductions for BMPs associated with streambank stabilization, agricultural field practices, and numerous urban practices. The workbook can be downloaded from the IDEM website at:

[www.state.in.us/idem/owm/planbr/wsm/watershed/319Grant/ProjectManagement/LoadReduction/Load%20reduction.htm](http://www.state.in.us/idem/owm/planbr/wsm/watershed/319Grant/ProjectManagement/LoadReduction/Load%20reduction.htm)



(Continued from page 2)

Beginning in July, the crew tackled the erosion problem head-on. They installed vegetated buffers, open-top culverts, and much more, all by hand. All told, they revegetated over 10,000 square feet and directly stabilized over 24,000 square feet of soil. Their work will have an impact well beyond those areas. They also provided a unique incentive for landowners to take advantage of their services—free labor. The YCC did not charge landowners for labor on any of their projects. Additionally, many local businesses supported the YCC by providing landowners with discounts on materials for YCC projects.

While the crew worked hard to complete their projects, quite a bit of work took place behind the scenes even before the crew began their season. Publicity began during the summer of 2000. In April 2001 the YCC Coordinator began organizing the program and providing technical assistance to landowners within the watershed. Soon the YCC Committee, made up of residents of Acton and Shapleigh, began meeting to establish goals, provide direction, and plan for the future. By the end of the crew's season, the YCC had provided erosion control advice and plans to over 60 landowners and completed work on 20 projects. Under the direction of the local committee, the YCC had also applied for several new grants and held two fundraisers.



The local community also played a large role in the success of the season. Many of the landowners who received erosion control plans decided to install most, if not all, of the

recommended conservation measures. This action required a substantial financial commitment on the part of the landowners and allowed the YCC to install conservation measures that varied in type and scale. The costs to landowner varied from \$0 to \$1,600, and the YCC worked on anywhere from 110 to 4,200 square feet at each site.

Over the season the crew continued to gain public support, which was evidenced by a flood of requests for technical assistance (including many requests for YCC work next year), feature articles in the three state and local newspa-

pers, public feedback, and the success of the season-ending tour.

The combination of community involvement and support, technical assistance, and the work of the crew and the crew leader, led to the YCC's productive season. The crew addressed several erosion problems within the Mousam Lake Watershed with the wide variety of projects that they installed. By installing such a variety of conservation measures, the crew gained a broad perspective of the problems that stormwater runoff can cause. Now the community also has several models that demonstrate how individuals can cost-effectively reduce their impact on the land and manage runoff on their own properties.

Not only did the crew work hard to complete all their projects, they also learned how to work locally to conserve resources in their own backyard.



In 2001 the Mousam Lake Youth Conservation Corps was funded in

Conservation Measure (BMP)	Number Installed	part by the
Berm diverters	3	Maine DEP
Broad-based dips	1	through a
Culvert armoring	8	U.S. EPA
Ditches	4	Nonpoint
Infiltration trenches / French drains	11	Source
Level lip spreaders	10	Grant under
Open-top culverts	9	Section 319 of
Plunge pool systems	2	the Federal
Properties seeded	7	Clean
Roof drip drains (stone)	1	Water Act.
Roof drip edges (vegetation)	2	The Towns
Settling basins	3	of Acton
Rip rap as slope stabilizer	1	and Shap-
Turnouts	5	leigh, Uni-
Vegetated buffer zones	41	cell,
Walkways	3	

Springvale Nurseries, the Mousam Lake Region Association, and the USDA Natural Resource Conservation Service also provided valuable support.

For More information contact Abraham Rushing at [abehusing@me.nacdnet.org](mailto:abehusing@me.nacdnet.org)



## WHITMAN PLEDGES TO IMPROVE IMPAIRED WATERS RULE

FOR RELEASE: MONDAY, JULY 16, 2001. EPA Administrator Christie Whitman took action today to improve the impaired water program by undertaking a review of a rule. EPA filed a motion in the District of Columbia Circuit Court asking the court to hold action on lawsuits over the rule for an 18-month period to enable the agency to review and revise the rule to achieve a program that is workable and meets the goal of clean water. The Agency took this action because of the ongoing controversy surrounding the rule and in light of the study completed in June by the National Academy of Sciences (NAS).

The criticized rule was published July 13, 2000. Because of the controversy, Congress prohibited EPA from putting the rule into effect by denying funds for that purpose. Some two dozen parties challenged the rule in court in August 2000. Today's action asks the court to stay this litigation to correspond with EPA's plan to propose an 18-month extension of the effective date of the rule.

"We have an existing TMDL program and this review will not stop ongoing implementation of that program, development of water quality standards, issuance of permits to control discharges, or enforcement against violators. EPA and states will continue to cooperate to identify impaired waters and set protective standards for those waters," explained Whitman. "I am asking for this additional time to listen carefully to all parties with a stake in restoring America's waters, states, cities, small towns and rural communities, plus industry, the environmental community and farmers to find a better way to finish the important job of cleaning our great rivers, lakes and streams."

***"We have an existing TMDL program and this review will not stop ongoing implementation of that program."***

The Clean Water Act requires states to identify waters not meeting water quality standards and to develop plans for cleaning them up. The framework for these plans is the Total Maximum Daily Load (TMDL) program. A TMDL is essentially a prescription designed to restore the health of the polluted body of water by indicating the amount of pollutants that may be present in the water and still meet water quality

standards.

"In order to ensure that this nation's bodies of water are cleaned up, we need an effective national program that involves the active participation and support of all levels of government and local communities," Whitman said. "Unfortunately, many have said the rule designed to implement the TMDL program falls short of achieving the goals."

Whitman refers to the fact that the TMDL rule has been challenged in the courts by numerous parties. In addition, the (NAS) completed a study, mandated by the Congress, that makes a number of recommendations for improving the program.

Whitman emphasized the NAS recommendations will be studied at the same time there is a public process going forward to consult with all interested parties. Over the next several months the Agency will conduct a stakeholder process and intends to propose necessary changes by Spring 2002 and hopes to adopt such changes within the 18-month time frame.

More than 20,000 bodies of water across America have been identified as polluted. These waters include more than 300,000 river and shoreline miles and five million acres of lakes. EPA estimates that more than 40,000 TMDLs must be established.

Robin Woods 202-564-7841 / woods.robin@epa.gov

## New TMDL Information Web Site

A new web site has been created as a joint effort of America's Clean Water Foundation and the Association of State and Interstate Water Pollution Control Administrators to convey important information relating to **Total Maximum Daily Loads** (TMDLs). Portions of the site have been supported by grants from the United States Environmental Protection Agency. Additionally, the USEPA is also providing technical assistance.

The **Goal** of the site is to enhance State and local capacity to develop and implement TMDLs and other watershed-based approaches to help solve water quality issues. It accomplishes this task by helping to:

- Educate stakeholders on challenges and opportunities that TMDLs present.
- Share useful information, tools, and effective approaches being used by the States.
- Foster communication among stakeholders and promote involvement in problem-solving at the local level.
- Enhance technical skills

The site Address:  
<http://www.tmdls.net/>



## Calendar of Events

September 13-16, 2001. Maine Environmental Educators Association Conference.

September 15-16, 2001. Fourth Annual Maine Rivers Fall Conference. Hosted by the Penobscot Indian Nation, at the Scialexis Center, Indian Island. FMI [www.mainerivers.org](http://www.mainerivers.org)

October 15, 2001. Protecting & Restoring Salmon Habitat: Lessons Learned Around the World (Conference & Workshop) Monday, October 15th, 2001; Wells Conference Center, University of Maine - Orono. Join representatives from Ireland, Scotland, Ontario, Washington, Oregon, California and Maine who will be sharing their experiences in habitat protection and restoration. Learn how citizens, communities, land owners, government and scientists can work together towards protecting and restoring habitat, to help bring the salmon back. This conference is being sponsored by the Atlantic Salmon Commission, US Fish & Wildlife Service, National Marine Fisheries Service, Atlantic Salmon Federation, Trout Unlimited, and the Sheepscot Valley Conservation Association. For more information, call (207) 725-2833 or (207) 586-5616, or [asfme@blazenetme.net](mailto:asfme@blazenetme.net).

October 23-25, 2001. Northeast Chapter of IECA Annual Conference & Trade Show to feature Erosion Control & NPDES Phase II in East Windsor, CT. FMI [www.ieca.org/conference/ne\\_chapter/neconf.htm](http://www.ieca.org/conference/ne_chapter/neconf.htm)

November 27-29, 2001. NPS Forum in New Orleans. For more information, agenda & registration information go to: <http://www.asiwpca.org/events/npsforums.htm>

May 2002. NEWIPICC NPS 13th Annual Conference—hosted by Maine DEP. FMI contact Norm Marcotte 287-7727.

## Resources Available

Piscataquis River (Maine River Quality Series), DEPLW2000-12. A multi-page, color, 8 1/2 x 11" folding handout providing information on various issues related to water quality. A version is also on the web (see the Streams Page). This is the first in a series. For a copy contact Maine DEP 207-287-3901 and ask for Piscataquis River publication number DEPLW2000-12.

The new 2002 Environmental Calendar is available. It is large format, with pen and ink illustrations. The title of the calendar is "How do we live on the land?", and the theme of the calendar is the effects of sprawl. Individual copies are available from the BLWQ receptionist. Multiple copies are also available by contacting Marianne DuBois 207 - 287-2115 or [marianne.s.dubois@state.me.us](mailto:marianne.s.dubois@state.me.us)

Nor' Easter. The Newsletter of the Northeast Aquatic Plant Management Society. For more information on the Society or their newsletter contact Gerald Smith, President at (508) 865-1000 or [gsmith@aquaticcontroltech.com](mailto:gsmith@aquaticcontroltech.com)

### Web Sites of Interest

**National Resource Council Report -- Assessing the TMDL Approach to Water Quality Management** (2001) text at: <http://www.nap.edu/books/0309075793/html/>

**Who Sprawls Most?** How Growth Patterns Differ Across the U.S. (report from the Brookings Institute) at: <http://www.brook.edu/es/urban/publications/fulton.pdf> This is the report that resulted in several recent editorials about sprawl in southern Maine.

This newsletter is prepared especially of those involved in non-point source pollution issues. It is funded through an EPA 319 Clean Water Act Grant. If you have any announcements, comments or items for the Nonpoint Source Times, or if you would like to be added to the mailing list, please call or write:

Kathy Hoppe  
Maine DEP  
1235 Central Drive  
Presque Isle, ME 04769  
phone: 207/764-0477  
fax: 207/764-1507  
[kathy.m.hoppe@state.me.us](mailto:kathy.m.hoppe@state.me.us)

**Clean water starts with you!**



Looking for some Federal Grant money?  
The Federal Commons, a new Web site recently launched by the Inter-Agency Electronic Grants Committee, will provide a "one-stop shop" for the entire federal grant application process. To access the Federal Commons and perform a search of grant programs to:  
[www.cfda.gov/federalcommons](http://www.cfda.gov/federalcommons)



Maine DEP  
1235 Central Drive  
Presque Isle, ME 04769